

Although the original Urban description of this taxon is often cited as "1911" or "1912", it was actually published on October 1, 1912.

PRIVA GRANDIFLORA (Ort.) Mold.

Additional bibliography: Mold., *Phytologia* 44: 93--95. 1979; Mold., *Phytol. Mem.* 2: 66, 359, & 573. 1980.

Recent collectors have found this plant growing on pine savannas and mesquite-nopal savannas on gentle slopes of reddish sandy loam in a valley between farms of corn and *Agave*, among scrub junipers on rock alluvium of plateaus, in oak and sparse pine forests, "in red soil with weeds", in cutover fields planted with trees of *Eucalyptus*, *Erythrina*, and *Acacia*, and among shrubs and many *Lupinus marshallianus*, at 5850--8500 feet altitude, in flower in July. Arsene refers to the plant as "pungent".

Material of this species has been misidentified and distributed in some herbaria as *Verbena* sp. and as *V. chamaedryfolia* var. *melindres* Cham.

Additional citations: MEXICO: Chihuahua: Ellis, Dunn, & Wallace 918 (Lb--129933). Durango: Johnston & Ettlinger 2664 (Me); Johnston & Johnston 1828 (Me--129807); LeDoux & Dunn 1909 (Lb--129502). Guanajuato: Kishler 395 (Me--268668), 699 (Me--274983). Mexico: Hess, Dziekanowski, Case, Dunn, Trott, & Thurm 1219 (Lb--153563); Wieder, Dunn, Bennett, & Torke 86 (Lb--139199). Michoacán: Arsène 2721 (Me--185506). Zacatecas: Lane & Longstreth 2707 (Au).

PRIVA HUMBERTI Mold.

Additional bibliography: Mold., *Phytologia* 44: 95. 1979; Mold., *Phytol. Mem.* 2: 251 & 573. 1980.

PRIVA LACINIATA Mold.

Additional bibliography: Mold., *Phytologia* 44: 95. 1979; Mold., *Phytol. Mem.* 2: 105 & 573. 1980.

PRIVA LAPPULACEA (L.) Pers.

Additional synonymy: *Tamonea lappulacea* Pers., in herb.

Additional & emended bibliography: Sandmark in L., *Amoen. Acad.* 5: 375. 1759; Aubl., *Hist. Pl. Guian. Fr.* 1: 16. 1775; J. F. Gmel. in L., *Syst. Nat.*, ed. 13, imp. 1, 2: 41. 1791; Steud., *Nom. Bot. Phan.*, ed. 1, 657 & 873. 1821; Loud., *Hort. Brit.*, ed. 1, 246. 1830; Schlecht. & Cham., *Linnaea* 5: 99. 1830; Sweet, *Hort. Brit.*, ed. 2, 418. 1830; Loud., *Hort. Brit.*, ed. 2, 246. 1832; G. Don in Loud., *Hort. Brit.*, ed. 3, 246. 1839; G. Don in Sweet, *Hort. Brit.*, ed. 3, 552. 1839; Steud., *Nom. Bot.*, ed. 2, 2: 397 & 750. 1841; D. Dietr., *Syn. Bot.* 3: 606. 1843; C. Muell. in Walp., *Ann. Bot. Syst.* 5: 706. 1860; Ulrich, *Internat. Wörterb.*, ed. 1, 185 (1871) and ed. 2, 185. 1875; Stahl, *Estud. Fl. Puerto Rico*, ed. 1, 3: 287--288 & 363. 1888; Baill., *Hist. Pl.* 11: 94. 1891; J. C. Willis, *Dict. Flow. Pl.*, ed. 2, 530 (1903) and ed. 3, 546. 1908; Urb., *Symb. Antil.* 4: 534. 1911; J. C. Willis, *Dict. Flow. Pl.*, ed. 5, 539. 1925; Stahl, *Estud. Fl. Puerto Rico*, ed. 2, 3: 287--

288 & 363. 1937; H. N. & A. L. Mold., Pl. Life 2: 33. 1948; Metcalfe & Chalk, Anat. Dicot. 2: 1040. 1950; J. C. Willis, Dicot. Flow. Pl., ed. 6, 539. 1951; Alain in León & Alain, Fl. Cuba, imp. 1, 4: 302, fig. 130 A. 1957; D. Powell, Bull. Inst. Jam. Sci. 15 (2): 424. 1973; Fournet, Fl. Illust. Phan. Guad. Mart. 1399--1400, fig. 665. 1978; Mukherjee & Chanda, Trans. Bose Res. Inst. 41: 53. 1978; Holm, Pancho, Herberger, & Plucknett, Geogr. Atlas World Weeds 296. 1979; López-Palacios, Revist. Fac. Farm. Univ. Andes 20: 30. 1979; Mold., Phytologia 44: 95--105. 1979; Mold., Phytol. Mem. 2: 23, 50, 66, 70, 73, 74, 76--79, 82, 84--87, 90, 92, 94, 96, 98, 99, 101, 102, 104, 105, 111, 118, 123, 125, 126, 129, 131, 135, 161, 175, 211, 317, 359, 375, 411, 434, 437, 444, 448, 449, 463, & 573. 1980; Seymour, Phytol. Mem. 1: 245. 1980; Wiggins, Fl. Baja Calif. [532] & 533, fig. 501. 1980; Mold., Phytologia 47: 414. 1981.

Additional & emended illustrations: Alain in León & Alain, Fl. Cuba, imp. 1, 4: 302, fig. 130 A. 1957; Fournet, Fl. Illust. Phan. Guad. Mart. 1400, fig. 665. 1978; Wiggins, Fl. Baja Calif. [532], fig. 501. 1980.

Recent collectors have found this plant growing at the lower edge of tropical deciduous forests with canopy trees 4.6--10.7 m. tall, in association with spiny legumes, *Bursera simarouba* and *Ficus* in large limestone canyons with *Muntingia calabura*, *Bauhinia divaricata*, *Piper*, and *Croton*, in pastures and disturbed pastures, gallery forests, weedy fields, the understory of low deciduous forests, and in roadcuts on inland steep slopes with disturbed mostly deciduous forest and scattered large trees (mostly *Ficus*), the ridges and upper Pacific gentle slopes with coffee plantations and a tall understory of mostly evergreen trees, sometimes in association with *Sida* and *Heliotropium*, on steep slopes and cliffs, rocky slopes bordering intermittent streams, and ridges, sometimes "common" or "uncommon" along roadsides, "common in shade on hillsides". in forest shade, or "common in cutover tall wet forests and roadsides with scattered individual trees and small remnant patches of forest", at sealevel to 100 m. altitude, in flower in February, July, August, and December, and in fruit in February and July. The corollas are said to have been "blue" on Foster & al. 3307, Stevens 2798, and Steyermark & Espinoza 108774, "pale-purple" on Stevens 2710, 4693, & 9380, "very pale-purple" on Stevens 9082, "purple" on Forero & al. 1902, "purple-pink" on Lemke 40, "pale-blue with 2 longitudinal violet stripes" on Lasseign P.21182, and "lavender-blue" on Croat 34678. Stevens refers to it as "uncommon". The vernacular name, "caddillo," has been reported.

Seymour (1980) cites the following collections from Nicaragua: Chontales: Seymour 6040. Granada: Dudley & Moore 1983, Hall & Bockus 7539, Seymour 7515. Managua: Seymour 752 & 2338. Masaya: Nervaez 97. Matagalpa: Atwood 2487. Río San Juan: Seymour 6189.

Additional citations: MEXICO: San Luis Potosi: Cochrane, Kolterman, & Cochrane 8651 (Ld). Tabasco: Romero, Gonzalez, & Miranda s.n. [C. Cowan 1689] (Au, N). Tamaulipas: Lemke 40 (Au). NICARAGUA: Carazo: W. D. Stevens 2710 (Ld), Chontales: W. D. Stevens 2798 (Ld), 4019 (Ld). [to be continued]

NEW SPECIES OF JUSTICIA (ACANTHACEAE)

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Recent efforts to identify specimens of Justicia collected in Sonora, Mexico and Arizona have resulted in the recognition of the following undescribed taxon.

JUSTICIA SONORAE Wassh., sp. nov.

Herba ramosa, caulibus simplicibus vel modice ramosis, ascendentibus, subquadrangularibus, glabris vel sericeis; lamina foliorum ovata, acuminata, basi obtusa, aliquanto firma, integra vel undulata, costa et venis lateralibus sericeis, cystolithis prominentibus; spicae plures, terminales et axillares, laxae, rhachibus pubescentibus; bracteae ovatae, acutae carinatae, parce puberulae; bracteolae lanceolatae, bracteolis similes; calycis segmenta 4, lanceolata, graciliter acuta, hirtella; corolla violacea ad purpuream, glabra vel parce hirtella, labiis subaequilongis, labio superiore suberecto, ovato, apice ipso truncato, labio inferiore patulo, 3-lobato, lobis obovatis, rotundatis; stamina exserta, lobis antherarum leviter superpositis; capsulae clavatae, puberulae.

Perennial herb to 45 cm high; stems weak, erect or ascending, simple or moderately branched, subquadrangular, shallowly grooved, glabrous or sericeous, the hairs more or less in two lines, internodes 3.5-9 cm long, cystoliths numerous, subpunctiform; leaf blades ovate, 2-5.5 cm long, 1.2-2.2 cm wide, acuminate, obtuse at base, entire or undulate, moderately firm, the costa and lateral veins (3-4 pairs) sericeous, the hairs similar to those on the stems, the intercostal areas essentially glabrous, cystoliths prominent under magnification; petioles slender, 5 mm long, the channel sparingly sericeous; flowers borne in axillary and terminal spikes, these rather lax, 3-10 cm long, 0.7-3 cm wide, the peduncle 1-2.5 cm long, subquadrangular, 0.75 mm thick, puberulous, the rachis glandular pubescent, lowermost internodes 2 cm long, successively shorter towards the tip of the spike; bracts ovate, 3.5 mm long, 1.4 mm wide at base, acute conduplicate, sparingly puberulous; bractlets lanceolate, 4 mm long, 0.75 mm wide, narrowed to a slender tip, in other respects similar to the bracts; calyx 5.5 mm long, deeply segmented, the segments 4, lanceolate, the anterior and posterior segments 0.75 mm wide below middle, the lateral segments 0.5 mm wide, all narrowed to a slender tip, the outer surface moderately hirtellous, the hairs intermixed with slightly longer and more rigid glandular ones, the inner surface glabrous; corolla violet to purple, 3-3.5 cm long, glabrous to sparingly hirtellous, the hairs spreading, straight, the tube narrowly campanulate, 3 mm

broad at base, narrowed at 5 mm above base to 2 mm, thence gradually enlarged to 5 mm at mouth, the upper lip suberect, ovate, 1.1 cm long, 6.5 mm wide at base, gradually narrowed to 1.2 mm at tip, the tip itself truncate, the lower lip more or less spreading, deeply 3-lobed, 1.7 cm long, 1 cm wide at base of lobes, these obovate, 1 cm long, the middle lobe 7 mm wide, the lateral ones 6 mm wide, all rounded at tip; stamens exerted about 5 mm beyond mouth of corolla tube, the filaments flattened, anther lobes slightly superposed, about 1.5 mm long, attached vertically to a relatively narrow connective, pollen grains 2-porate, bilateral, 52 μ long, 37 μ wide; capsules clavate, 1.2 cm long, 3 mm broad, 1.8 mm thick, puberulous, some of the hairs glandular; seeds 4, brownish, cordate, flattened, about 2 mm long and wide, and 0.5 mm thick, muricate, the projections low and rounded.

Type. T. R. Van Devender s. n. (holotype US, isotype ARIZ), Mexico, Sonora: 17.2 m S-SE of Magdalena, palm canyon in Cerro Cinta de Plata (= Sierra Babiso), 13 Feb 1977.

Distribution. Growing on steep banks and slopes and near bottom of shaded arroyo in Sonora, Mexico and Arizona, at elevation between 700 and 1,130 m. Dominant perennial plant association: Quercus arizonica, Juglans major, Fraxinus velutina, Agave ochoui and Muhlenbergia dumosa. Arizona. Cochise County: Kiper Springs, 110° 24' W, 32° 03' N, 7 May 1979, R. M. Turner 79-77 (ARIZ, US). Mexico. Sonora: Palm Canyon, 17 m SE of Magdalena, Cerro Cinta de Plata (Sierra Babiso), 9 Mar 1979, D. Steadman & K. Schmidt s. n. (ARIZ); 19 Mar 1978, Niall F. McCarten & Roxanne L. Bittman 2693 (ARIZ); 27-29 Nov 1977, Mike Fay 714 (ARIZ); 8-9 Apr 1977, T. R. Van Devender, M. C. Kearns & K. L. Cole s. n. (ARIZ, US); 2.3 m E of Rio de Bavispe by Huasabas to El Coyote and Huachinera Road, 109° 16' W, 29° 56' N, 18 Mar 1979, F. W. Reichenbacher 215 (ARIZ). Cultivated in greenhouse at Desert Botanical Garden, Papago Park, Phoenix, Arizona, 29 Dec 1978, R. G. Engard s. n. (US).

Justicia sonorae is not nearly allied to the other known species.